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By ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Reply Comments in Docket Nos. 16-42, 97-80

Dear Ms. Dortch:

On September 8, 2016, Chairman Wheeler released a Fact Sheet with a revised proposal regarding consumers' video navigation choices as they apply to multichannel video programming distributors (MVPDs).[1] This ex-parte letter, filed at the request of CALinnovates, summarizes the deficiencies that remain unaddressed and discusses additional economic miscalculations introduced into this latest version of the STB proposal.

Although the Fact Sheet is portrayed as an industry compromise from the Chairman's original proposal of March 16, 2016,[2] the revised proposal remains economically unsound. The revisions are not sufficient because they do not address the flaws that other economists and I pointed out to the Commission.[3] The revised proposal still relies on incorrect data regarding consumer STB spending and still fails to recognize the competitive nature of the markets for wholesale STB

[1] Fact Sheet: Chairman Wheeler's Proposal To Increase Consumer Choice & Innovation In The Video Marketplace, DOC-341152A1, rel. September 8, 2016.

[2] Expanding Consumers' Video Navigation Choices; Commercial Availability of Navigation Devices, 81 FR 140333 (March 16, 2016) (Navigation Devices Proposed Rule). The FCC believes that additional rules are necessary to ensure a competitive market for equipment including software that can access multichannel video programming.

[3] See, e.g., Declaration of Christian M. Dippon, PhD, April 21, 2016, Expanding Consumers' Video Navigation Choices, MB Docket No. 16-42; Declaration of Christian M. Dippon, PhD, April 21, 2016 (attached to Comments of CALinnovates); Declaration of Michael L. Katz, April 22, 2016 (attached to Comments of AT&T); Declaration of Dr. Stanley M. Besen, April 21, 2016 (Comments of Comcast Corporation and NBCUniversal Media, LLC); and Steven S. Wildman, The Scary Economics of the NPRM's Navigation Device Rules, April 16, 2016 (attached to Comments of the National Cable & Telecommunications Association).

provision and MVPD video distribution. The revised proposal also remains blind to the extensive innovation that has already taken place in both the hardware and app sides of video navigation devices. Most important, the proposal continues to lack the necessary specificity for interested parties to comprehend fully the economic ramifications of the proposal if adopted in the upcoming vote on September 29, 2016. Thus, despite the revisions, the proposal still lacks economic justification and remains incomplete.

Even worse, the few details revealed in the Fact Sheet combined with additional information collected by the media from background briefings by FCC staff make it clear that the proposal is unworkable and will negatively affect STB, app, and platform innovation and aggravate the digital divide. I briefly address each of these newly introduced deficiencies in the following.

The revised proposal is economically inefficient, which will lead to higher consumer prices

If adopted, the proposed final rules "will require pay-TV providers to offer to consumers a free app … to access all the programming they pay for on a variety of devices, including tablets, smartphones, gaming systems, streaming devices or smart TVs." As these apps only work on devices with a corresponding operating system or platform, Chairman Wheeler demands, "Pay-TV providers must provide their apps to widely deployed platforms, such as Roku, Apple iOS, Windows and Android."

A subsequent FCC background briefing revealed that apps need to be provided for "any operating system that has had shipments in the U.S. of at least 5 million devices during the previous year. If a platform meets or exceeds that threshold, MVPDs must write an app for it."[4] Crucially, once a platform meets this threshold, then the MVPDs must continue to support the platform regardless of current sales volumes. The Chairman believes that the mandate will "spur competition." This is wrong because it misses, at least, two important factors.

First, in light of the 5-million shipment threshold, the number of platforms for which MVPDs must develop and maintain free apps is much wider than the few platforms listed in the Fact Sheet. Although exact shipment figures are not publicly available for most platforms, if implemented in 2016, MVPDs would potentially have to provide apps for the following platforms:

- iOS that is used on Apple iPhones, iPads, and Mac computers
- tvOs that is used on the Apple TVs
- Android that is used on smartphones and tablets by various manufactures (e.g., Samsung and HTC)
- Windows OS that is used on PCs and tablets
- Orbis OS that is used on the Sony PlayStation 4

[4] Jeff Baumgartner, "FCC's Magical Number: 5 Million," *multichannel.com*, September 8, 2016.

- Windows 8 as modified to work on Microsoft's Xbox One
- Firefox that is used on selected smartphones, tablets, and smart TVs
- Tizen that is used in Samsung's smart TVs, smartphones, tablets, and other devices
- Amazon Fire OS that is used by Amazon on its Kindle tablets and smartphones
- Roku OS that is used on the Roku Streaming Player
- Chromecast that is used by Chromecast's HDMI dongles
- webOS that is used by LG's Smart TVs
- Viera Cast that is used by Panasonic TVs
- Slingbox that is used for Slingbox STBs
- Platforms for automotive entertainment systems, e.g., Blackberry's QNX OS

MVPDs would likely be required to develop a free app for at least these 15 or so different platforms, a number that likely would be significantly higher as each platform comes in different versions. For instance, there have been 10 versions of the iOs, at least 7 versions of tvOS, 14 versions of the Android OS, and over two dozen versions of Microsoft Windows. Thus, either the MVPDs develop fully backwards compatible apps for each platform or they stand to produce free apps for over 60 types and versions of operating systems.

Additionally, the MVPDs would need to update their apps in lockstep with platform upgrades. They would also have to monitor the US market for new platforms that might sell more than 5-million units in a given year. With devices connected to the Internet (IoT) expected to grow to 34 billion by 2020, this list will grow significantly year after year.

There is no doubt that such a mandate is highly inefficient and places an enormous financial burden on MVPDs. Developing and maintaining apps is an expensive proposition. Moreover, I am not aware of any app that supports 15 platforms let alone 60 versions of different platforms. In fact, marketplace evidence shows that mobile app developers find a positive business case by making their apps compatible with two or three platforms. More specifically, Microsoft has an established base of well over 5 million units of their phones that use the Windows Phone Operating System (WPOS). Blackberry also has a base of over 5 million units. Yet, despite this, app developers elected not to build apps for these platforms. In 2013, mobile app developers built their apps on average for 2.6 platforms, down from 2.7 in 2012 and 3.2 in 2011.[5] As a consequence of the high cost of developing and maintaining apps and despite having platforms with many millions of users, both Microsoft WPOS and BlackBerry had many fewer apps written for their smartphones, about 130,000 and 120,000, respectively, than did iOS and Android with about a million each.[6]

[5] Developer Economics, "Developer Tools: The Foundations of the App Economy," 2013.

[6] Nokia Corporation, SEC, Form 20-F, December 31, 2012, p. 53; "Windows and Windows Phone app stores combined now feature over 400,000 apps," *phonearena.com*, April 2, 2014; N. Ingraham, "Apple announces 1 million apps in the App Store,"

The market has spoken—a sensible app developer focuses on a limited number of platforms. Chairman Wheeler's proposal is not only unprecedented, but it directly contradicts an efficient market outcome. Because this burden applies to all MVPDS, except those with fewer than 400,000 subscribers, the MVPDs will pass on this near unilateral cost increase to subscribers in the form of higher retail prices. Make no mistake—there is no world in which such costs could simply be absorbed—consumers *will* pay the price.

Second, the revised proposal also mandates an integrated search function (the ability "to search their programming options in one place") across all sources of programming.[7] Thus, an MVPD must enable subscribers to search both linear and on-demand content on its own service along with that of other video services "accessible" through the device that carries the app. For example, there are a significant number of free programming sources, such as the websites of the broadcast networks. The ABC network site listed over 1,000 free episodes in March 2016.[8] In addition, many other free programming locations exist, such as the three that carry network episodes available on Hulu, namely, view.yahoo.com, New York Magazine's Vulture.com, and Time Inc.'s People.com.[9] In addition, because all on-demand content is "accessible," the MVPDs would apparently have to integrate the content of Apple's iTunes into the search. As many MVPD subscribers also subscribe to OTT services like Netflix and Amazon Prime, MVPDs will have to integrate the programming of all OTT providers. There are numerous OTT services, and the number is rapidly increasing. According to industry analyst SNL Kagan, there were 33 OTT services launched in 2015, more than double the number launched in 2014.[10] Note that once an MVPD is eligible under the mandate no minimum number of its subscribers who are also subscribers to a particular OTT is required for the app requirement to be triggered. Thus, because it is likely that at least some subscribers to an OTT service will be served by an MVPD,[11] all OTT services will have to be integrated into the search. This level of integration, which covers numerous proprietary systems, is a level of search integration that far exceeds the number of commercially negotiated agreements by, for example, Roku.[12]

Similar to Mr. Wheeler's proposed mandate to offer apps for all "popular" platforms, the integrated search function represents an inefficient cost increase for all MVPDs. The MVPDs

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theverge.com, October 22, 2013; "Android's Google Play beats App Store with over 1 million apps," *phonearena.com*, July 24, 2013; R. Cheng, "BlackBerry Live by the numbers: 120,000 apps available," *CNet.com*, May 14, 2013.

[7] According to the revised proposal, the integrated search capability could come "from their pay-TV provider, an over-the-top service or a programmer's standalone app," although the mandate apparently only applies to MVPDs and not OTT services like Netflix.

[8] Jim Donnelly, "Watch 1,043 Free Episodes of ABC Shows!" May 27, 2016, http://abc.go.com/news/insider/143-for-free-watch-abc-watch-full-episodes-with-no-sign-in-042715.

[9] Todd Spangler, "Hulu Ends Free Streaming Service," *variety.com*, August 8, 2016.

[10] SNL Kagan, "Economics of Mobile Programming 2016," May 2016, p. 2.

[11] Currently, the smallest MVPD, defined in the revised proposal as having 400,000 or more subscribers, is WideOpenWest Networks, d/b/a WOW!, with 524,000 subscribers (SNL Kagan, "Top Cable MSOs," September 14, 2016).

[12] Michael Rusignola, "Roku Search now finds entertainment from 50+ streaming channels including news," June 17, 2016, https://blog.roku.com/blog/2016/06/17/roku-search-now-finds-entertainment-from-50-streaming-channels-including-news/.

will undoubtedly pass on these additional costs to subscribers whether the subscribers value these services or not.

The revised proposal will hinder, not promote, innovation

In addition to being inefficient and costly to implement, the revised proposal will negatively affect STB, app, and platform innovation. For example, the requirement that subscribers have "an equivalent ability to access content via the pay-TV app as they have in the set-top box" would limit changes in STBs until all apps could provide the equivalent functionality. This would drastically reduce the speed at which technological improvements would become available. It would also reduce the incentive to innovate because the innovator would no longer obtain most of the value from the innovation. Similarly, the requirement that there be "no discrimination in search" would prevent the app from offering quality-adjusted search results if the result led it "to promote the pay-TV app over other sources of programming in the search function."

The revised proposal also has the potential to reduce platform innovation by inhibiting new entry. The mandate to provide free apps to any platform reaching 5-million units in one year will handicap device startups employing an alternative platform with greater long-term potential than an incumbent platform but now will be forced to compete with incumbents receiving a subsidized app. As Amazon noted in a recent letter to the FCC, "it is not clear new entrants could overcome this [widely deployed] threshold."[13]

The revised proposal aggravates the digital divide

Chairman Wheeler's revised proposal excludes smaller operators "with fewer than 400,000 subscribers." This exception affects approximately 4.2 million cable subscribers and 310,000 telco video providers.[14] The affected subscribers predominantly live in small towns and rural communities where innovation and lower prices arguably would improve the digital divide.[15] Thus, exempting small MVPDs would aggravate the digital divide highlighted in the FCC's *Connecting America: The National Broadband Plan* and deprive the people that allegedly would benefit the most from the proposal. For them, the only option would be to switch to DirectTV or DISH Network because they are likely the only non-exempt MVPDs available to them. However, subscribers would still need to rent or purchase a gateway device for satellite services in the rural areas where no broadband connection is available, defeating the entire objective of

[13] G. J. Waldron (Counsel to Amazon.com Inc.) letter to M. H. Dortch (FCC), Re: Written Ex Parte Presentation in Docket Nos. 16-42, 97-80, September 12, 2016.

[14] CenturyLink News Release, "CenturyLink Reports Second Quarter 2016 Results," August 3, 2016.

[15] See, e.g., the American Cable Association website, which states, "Small markets and rural areas across the country are receiving video, high-speed broadband, and phone services from nearly 850 small and medium-sized independent operators represented by the American Cable Association (ACA)."

Chairman Wheeler's plan.[16] Furthermore, the MVPDs exempt from the app mandate would be careful to keep their subscribership below the 400,000 threshold by limiting innovation and increasing prices, if necessary. The Chairman's app requirement could turn out to be devastating for an MVPD that accidentally exceeds the 400,000 subscriber threshold in a given year.

The revised proposal is still not feasible because it will not meet the goals that Chairman Wheeler wants. With few realistic benefits and a real danger of increasing prices and damaging market performance, I remain deeply concerned that the proposal if adopted will cause more harm than good for consumers. I urge the Commission to consider this when it votes on the revised proposal.

Sincerely,

Christian Dippon
Senior Vice President
NERA Economic Consulting

cc: Chairman Tom Wheeler
Commissioner Mignon L. Clyburn
Commissioner Jessica Rosenworcel
Commissioner Ajit Pai
Commissioner Michael O'Rielly

[16] See, e.g., J. Manner (EchoStar) and A. Minea (DISH Network) letter to M. H. Dortch (FCC), Re: Expanding Consumers' Video Navigation Choices, MB Docket No. 16-42; Commercial Availability of Navigation Devices, CS Docket No. 97-80, September 8, 2016.